

In re Application of : Dario NERI et al.

Serial No.: 10/821,930

Group Art Unit: 1614

Filed: 12 April 2004

Examiner: Unknown

For: SPECIFIC BINDING MOLECULES FOR SCINTIGRAPHY, CONJUGATES CONTAINING THEM AND THERAPEUTIC METHOD FOR TREATMENT OF ANGIOGENESIS

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§ 1.56, 1.97 and 1.98

Commissioner for Patents
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Cited Materials

☒ Copies of materials listed but not attached were cited in benefit (35 U.S.C. § 120) ancestor application Serial No. 09/512,082, on Form 892 by the Examiner and/or Form 1449 by the applicant; see 37 C.F.R. § 1.98(d).

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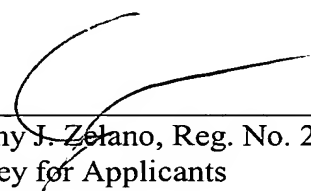
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Respectfully submitted,



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Attorney Docket No.: ELLIS-0002-P02-C01

Date: February 7, 2005

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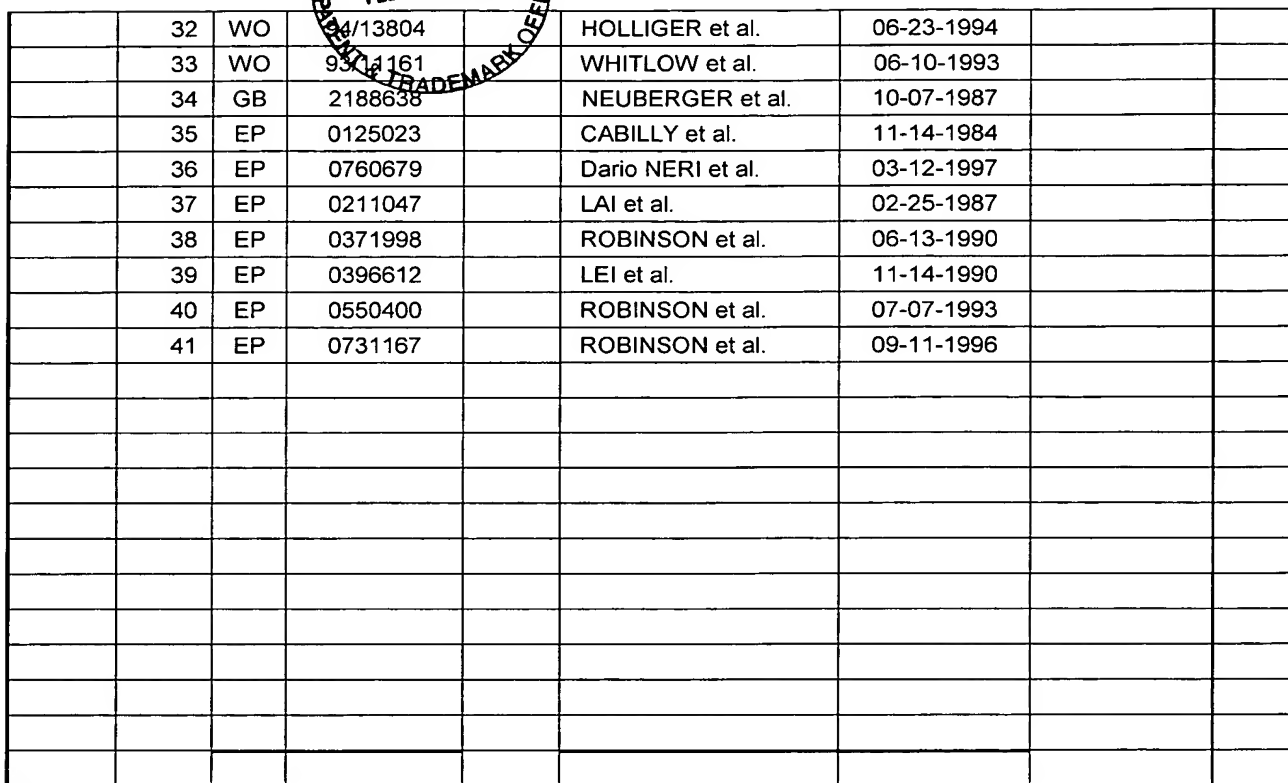
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| First Named Inventor | Dario NERI et al. |
| Group Art Unit | 1614 |
| Examiner Name | Unknown |
| Attorney Docket Number | ELLIS-0002-P02-C01 |

U.S. PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY |
|------------------------|-----------------------|----------------------|--------------------------------------|----------------------------------------------------|-----------------------------------------------------|
| | | Number | Kind Code ² (if known) | | |
| | 1 | 5,734,025 | | KOMAI et al. | 03-1998 |
| | 2 | 5,849,701 | | ROBERTS et al. | 12-1998 |
| | 3 | 5,747,452 | | RUOSLAHTI et al. | 05-1998 |
| | 4 | 5,837,813 | | RUOSLAHTI et al. | 11-1998 |
| | 5 | 5,523,229 | | FEINBERG et al. | 06-1996 |
| | 6 | 6,696,245 | | WINTER et al. | 02-2004 |
| | 7 | 5,710,134 | | BOSSLET et al. | 01-1998 |
| | 8 | 6,140,470 | | GAREN et al. | 10-2000 |
| | 9 | 5,243,029 | | MATUSUURA et al. | 09-07-1993 |
| | 10 | 5,648,485 | | DOLPHIN et al. | 07-15-1997 |
| | 11 | 5,817,776 | | GOODMAN et al. | 10-06-1998 |
| | 12 | 5,831,088 | | DOLPHIN et al. | 11-03-1998 |
| | 13 | 5,843,156 | | SLEPIAN et al. | 12-01-1998 |
| | 14 | 5,877,289 | | THORPE et al. | 03-02-1999 |
| | 15 | 5,913,884 | | TRAUNER et al. | 06-22-1999 |
| | 16 | 5,976,535 | | FRITZBERG et al. | 11-02-1999 |
| | 17 | 6,004,555 | | THORPE et al. | 12-21-1999 |
| | 18 | 6,015,897 | | THEODORE et al. | 01-18-2000 |
| | 19 | 6,036,955 | | THORPE et al. | 03-14-2000 |
| | 20 | 6,051,230 | | THORPE et al. | 04-18-2000 |
| | 21 | 6,093,399 | | THORPE et al. | 07-25-2000 |

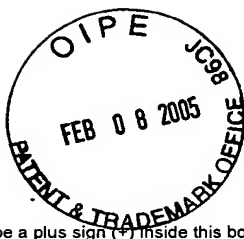
FOREIGN PATENT DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Foreign Patent Document | | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
|------------------------|-----------------------|-------------------------|---------------------|--------------------------------------|----------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------|----------------|
| | | Office ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| | 22 | WO | 9958570 | | Dario NERI et al. | 10-18-1999 | | |
| | 23 | WO | 0162800 | | Dario NERI et al. | 08-30-2001 | | |
| | 24 | JP | 0276598 | | SEKIGUCHI et al. | 03-15-1990 | | √ |
| | 25 | JP | 4169195 | | SEKIGUCHI et al. | 06-17-1992 | | √ |
| | 26 | WO | 9745544 | | Medical Res Council | 12-04-1997 | | |
| | 27 | WO | 96/23816 | | CREIGHTON et al. | 08-08-1996 | | |
| | 28 | EP | 344134 | | ZARDI et al. | 11-29-1989 | | |
| | 29 | EP | 184187 | | KUDO et al. | 06-11-1986 | | |
| | 30 | EP | 239400 | | WINTER et al. | 09-30-1987 | | |
| | 31 | EP | 0120694 | | BOSS et al. | 10-03-1984 | | |



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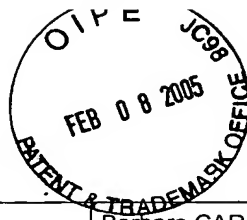
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NON PATENT LITERATURE DOCUMENTS

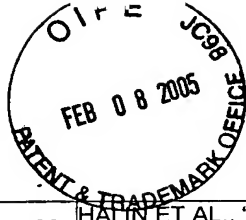
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|------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| | 42 | TOMOHIKO FUKUDA ET AL., "Mice lacking the EDB segment of fibronectin develop normally but exhibit reduced cell growth and fibronectin matrix assembly in vitro," Cancer Research, 1 October 2002, pages 5603-5610, vol. 62. | |
| | 43 | ANDREW GRIFFITHS ET AL., "Isolation of high affinity human antibodies directly from large synthetic repertoires," The EMBO Journal, 1994, pages 3245-3260, vol. 13, no. 14. | |
| | 44 | Dario NERI et al., "Targeting by affinity-matured recombinant antibody fragments of an angiogenesis associated fibronectin isoform", Nature Biotechnology, Vol. 15, November 1997, pages 1271-1275 | |
| | 45 | Dario NERI et al., "Affinity reagents against tumour-associated extracellular molecules and newforming vessels," Advanced Drug Delivery Reviews, 6 April 1998, pages 43-52, vol. 31, no. 1-2, XP002124780, pages 46, right-hand column, page 49, left-hand column. | |
| | 46 | PINI, A., et al., "Design and use of a phage display library. Human antibodies with subnanomolar affinity against a marker of angiogenesis eluted from a two-dimensional gel," Journal of Biological Chemistry, August 21, 1998, pages 21769-21776, Vol. 273, no. 34, XP002124781. | |
| | 47 | VITI F. ET AL., "Increased Binding Affinity and Valence of Recombinant Antibody Fragments Lead to Improved Targeting of Tumoral Angiogenesis," Cancer Research, 15 January 1999, pp. 347-352, vol. 59, no. 2, XP002124782, the whole document. | |
| | 48 | R. FATTORUSSO ET AL., "NMR structure of the human oncofetal fibronectin ED-B domain, a specific marker for angiogenesis", 15 April 1999, Structure, pp. 381-390, vol. 7, no. 4, XP002124783. | |
| | 49 | TARLI L ET AL., "A high-affinity human antibody that targets tumoral blood vessels," Blood, 1 Jul 1999, pages 192-8, vol. 94, no. 1, XP002124784. | |
| | 50 | M. ZALUTSKY ET AL., "Labeling monoclonal antibodies and F(ab')2 fragments with the alpha-particle-emitting nuclide astatine-211: preservation of immunoreactivity and in vivo localization," Proceedings of the National Academy of Sciences in the U.S.A., September 1989, vol. 86, no. 18, pages 7149-7153, XP002172060, Washington DC, USA, abstract. | |
| | 51 | S. LINDEGREN ET AL., "Chloramine-T in high-specific-activity radioiodination of antibodies using N-succinimidyl-3-(trimethylstannyl)benzoate as an intermediate," Nuclear Medicine and Biology, October 1998, pages 659-665, vol. 25, no. 7, XP004149436, Oxford, GB, abstract. | |
| | 52 | M. BIRCHLER ET AL., "Selective targeting and photocoagulation of ocular angiogenesis mediated by a phage-derived human antibody fragment," Nature Biotechnology, October 1999, pages 984-988, vol. 17, no. 10, XP002172061, New York, NY, USA, the whole document. | |
| | 53 | PATRIZIA CASTELLANI et al., "The Fibronectin isoform containing the ED-B Oncofetal domain: A marker of angiogenesis," Int. J. Cancer, 1 December 1994, pages 612-618, vol. 54. | |
| | 54 | LUCIANO ZARDI, et al., "Transformed human cells produce a new fibronectin isoform by preferential alternative splicing of a previously unobserved exon", The Embo Journal, Vol. 6, No. 8, August 1987, pages 2337-2342 | |



| | | |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 55 | Barbara CARNEMOLLA, et al., "Phage antibodies with pan-species recognition of the oncofoetal angiogenesis marker fibronectin ED-B domain," International Journal of Cancer, Vol. 68, No. 3, November 4, 1996, pages 397-405 | |
| 56 | ZANG, et al., "Antibody Specific for Extra Domain B of Fibronectin Demonstrates Elevated Levels of Both Extra B(+) and B(-) Fibronectin in Osteoarthritic Canine Cartilage" <u>Matrix Biology</u> Vol. 14 (1994), pp. 623-633 | |
| 57 | PETERS, "Expression of the alternatively spliced EIIIB segment of fibronectin," Cell Adhesion and Communication, vol. 3, no. 1, pages 67-89, 1995, XP002042097. | |
| 58 | Carnemolla, et al., "The Inclusion of the Type III Repeat ED-B in the Fibronectin Molecule Generates Conformationals That Unmask a Cryptic Sequence" The Journal of Biological Chemistry, (1992) Vol. 267, No. 34, pp. 24689-24692. | |
| 59 | Judah FOLKMAN, "Angiogenesis in cancer, vascular, rheumatoid and other disease", Nature Medicine, Vol. 1, Number 1, 1995, pages 27-31 | |
| 60 | Renata PASQUALINI et al., "α-Vintegrins as receptors for tumor targeting by circulating ligands", Nature Biotechnology, Vol. 15, June 1997, pages 542-546. | |
| 61 | Michael S. O'REILLY et al., "Angiostatin induces and sustains dormancy of human primary tumors in mice", Nature Medicine, Vol. 12, Number 6, June 1996, pages 689-692 | |
| 62 | Xianming HUANG et al., "Tumor Infarction in Mice by Antibody-Directed Targeting of Tissue Factor to Tumor Vasculature", Science, Vol. 275, January 24, 1997, pages 547-550 | |
| 63 | Dario NERI et al., "Biophysical methods for the determination of antibody-antigen affinities", Tibtech (Vol. 14), December 1996, pages 465-470 | |
| 64 | E. Sally WARD et al., "Binding activities of a repertoire of single immunoglobulin variable domains secreted from <i>Escherichia coli</i> ", Nature, Vol. 341, No. 6242, October 12, 1989, pages 544-546. | |
| 65 | Robert E. BIRD et al., "Single Chain Antigen-Binding Proteins", Science, Vol. 242, October 21, 1988, pages 423-426. | |
| 66 | James S. HUSTON, et al., "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in <i>Escherichia coli</i> ", Proc. Natl. Acad. Sci. USA, Vol. 85, August 1988, pages 5879-5883 | |
| 67 | Philipp HOLLIGER, et al., "Diabodies": Small bivalent and bispecific antibody fragments", Proc. Natl. Acad. Sci. USA, Vol. 90, July 1993, pages 6444-6448 | |
| 68 | Philipp HOLLIGER, et al., "Engineering bispecific antibodies", Current Opinion in Biotechnology, Vol. 4, No. 4, 1993, pages 446-449 | |
| 69 | Dario NERI et al., "High-affinity Antigen Binding by Chelating Recombinant Antibodies (CRAbs)", Journal of Molecular Biology, Vol. 246, No. 3, February 4, 1995, pages 367-373 | |
| 70 | Cyrus CHOTHIA, et al., "Canonical Structures for the Hypervariable Regions of Immunoglobulins", Journal of Molecular Biology, Vol. 196, No. 4, August 20, 1987, pages 901-917 | |
| 71 | D. NERI, et al., "Multipurpose High Sensitivity Luminescence Analyzer (LUANA): Use in Gel Electrophoresis", Biotechniques, Vol. 20, No. 4, April 1996, pages 708-712 | |
| 72 | Ian M. TOMLINSON, et al., "The Repertoire of Human Germline V _H Sequence Reveals about Fifty Groups of V _H Segments with Different Hypervariable Loops", Academic Press, Vol. 227, No. 3, October 5, 1992, pages 776-798 | |
| 73 | Johnathan P. L. COX, et al., "A directory of human germ-line V _x segments reveals a strong bias in their usage", European Journal of Immunology 4/1994, pages 827-836 | |
| 74 | James D. MARKS, et al., "By-passing Immunization Human Antibodies from V-gene Libraries Displayed on Phage", Journal of Molecular Biology, Vol. 222, No. 3, December 5, 1991, pages 581-597 | |
| 75 | Tim CLARKSON, et al., "Making antibody fragments using phage display libraries", Nature, Vol. 352, August 15, 1991, pages 624-628 | |
| 76 | Hennie R. HOOGENBOOM, et al., "Multi-subunit proteins on the surface of filamentous phage: methodologies for displaying antibody (FAB) heavy and light chains", Nucleic Acids Research, Vol. 19, No. 15, August 11, 1991, pages 4133-4137 | |



| | | |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 77 | Dario Neri, et al., "Radioactive labeling of recombinant antibody fragments by phosphorylation using human casein kinase II and γ - ³² P-ATP, Nature Biotechnology, Vol. 14, No. 4, April 1996, pages 485-490 | |
| 78 | Robert SCHIER, et al., "Identification of functional and structural amino-acid residues by parsimonious mutagenesis" Gene, Vol. 169, (1996), No. 2, pages 147-155 | |
| 79 | Wataru ITO, et al., "Mutations in the Complementarity-determining Regions do not cause Differences in Free Energy during the Process of Formation of the Activated Complex between an Antibody and the Corresponding Protein Antigen", Journal of Molecular Biology, Vol. 248, No. 4, May 12, 1995, pages 729-732 | |
| 80 | C. HAMERS-CASTERMAN, et al., "Naturally occurring antibodies devoid of light chains", International Weekly Journal of Science, Vol. 363, NO. 6428, June 3, 1993, pages 446-448 | |
| 81 | U. JÖNSSON, et al., "Real-Time Biospecific Interaction Analysis Using Surface Plasmon Resonance and a Sensor Chip Technology", Biotechniques, Vol. 11, No. 5, November 1991, pages 620-627 | |
| 82 | Ahuva NISSIM, et al., "Antibody fragments from a 'single pot' phage display library as immunochemical reagents", The Embo Journal, Vol. 13, No. 3, February 1, 1994, pages 692-698 | |
| 83 | Alessandro PINI, et al., "Hierarchical affinity maturation of a phage library derived antibody for the selective removal of cytomegalovirus from plasma", Journal of Immunological Methods, Vol. 206, nos-1-2, 1997, pages 171-182 | |
| 84 | Daniel R. DEEVER, "A new non-isotopic detection system for immunoassays", Nature, Vol. 377, No. 6551, October 26, 1995, pages 758-760 | |
| 85 | Matsuura H., Takio K., Titani K., Greene T., Lavery SB, Salyan ME, Hakomori S., J. Biol. Chem. 263, 3314-3322, "The oncofetal structure of human fibronectin defined by monoclonal antibody FDC-6. Unique structural requirement for the antigenic specificity provided by a glycosylhexapeptide", March 1988. Abstract Only | |
| 86 | Zheng, M. ET AL., Int. J. Pept. Protein Res., 43, 230-8, "Synthetic immunochemistry of glycohexapeptide analogues characteristic of oncofetal fibronectin. Solid-phase synthesis and antigenic activity"; March 1994. Abstract Only | |
| 87 | Feinberg, RF, Kliman HJ, Bedian V, Monzon-Bordonaba F, Menzin AW, Wang CL; Am. J. Obstet. Gynecol 172, 1526-1536; "Monoclonal antibody X18A4 identifies an oncofetal fibronectin epitope distinct from the FDC-6 binding site"; May 1995. Abstract Only | |
| 88 | Paul K. Schick, Carol M. Wojenski, Vickie D. Bennett, and Tamara Ivanova; "The Synthesis and Localization of Alternatively Spliced Fibronectin EIIIB in Resting and Thrombin-Treated Megakaryocytes"; Blood, Vol. 87, No. 5, March 1, 1996; pp. 1817-1823 | |
| 89 | Denise G. White, James W. Hall, David W. Brandli, Amy L. Gehris, and Vickie D. Bennett; "Chick Cartilage Fibronectin Differs in Structure from the Fibronectin in Limb Mesenchyme"; 1996; Exp. Cell Res. 224, pp. 391-402 | |
| 90 | DATABASE WPI Week 9017 Derwent Publications Ltd., London, GB; AN 90-128252 XP002042103 & JP 02 076 598 A (FUJITA GAKUEN ET AL.), 15 March 1990 | |
| 91 | DATABASE WPI Week 9231 Derwent Publications Ltd., London, GB; AN 92-253398 XP002042104 & JP 04 169 195 A (FUJITA GAKUEN ET AL.), 17 June 1992 | |
| 92 | ASHLEY PUBLICATIONS LTD., "Antibodies to the ED-B domain of fibronectin, their constructs and uses," Medical Research Council, ISSN 1354-3776, Patent Evaluation; WO 9745544; Exp. Opin. Ther. Patents (1998), 8(7):907-910. | |
| 93 | MARIANI ET AL., "Tumor Targeting Potential of the Monoclonal Antibody vBC-1 against Oncofetal Fibronectin in Nude Mice Bearing Human Tumor Implants," The American Cancer Society, 15 December 1997, pp. 2378-2384, vol. 80, no. 12. | |
| 94 | DARIO NERI ET AL., "Antibodies from phage display libraries as immunochemical reagents," Methods in Molecular Biology, Immunochemical protocols, 2 nd ed., pp. 475-500, vol. 80. | |
| 95 | BIRCHLER ET AL., "Infrared photodetection for the in vivo localisation of phage-derived antibodies directed against angiogenic markers," Journal of Immunological Methods, 1999, pages 239-248, vol. 231. | |
| 96 | FREDRIK NILSSON ET AL., "The use of phage display for the development of tumour targeting agents," Advanced Drug Delivery Reviews, 2000, pages 165-196, vol. 43. | |
| 97 | FREDRIK NILSSON ET AL., "Targeted Delivery of Tissue Factor to the ED-B Domain of Fibronectin, a Marker of Angiogenesis, Mediates the Infarction of Solid Tumors in Mice," Cancer Research, 15 January 2001, pages 711-716, vol. 61. | |



| | | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 98 | HALIN ET AL., "Antibody-based targeting of Angiogenesis," Critical Reviews in Therapeutic Drug Carriers Systems, 2001, pages 299-339, vol. 28, no. 3. | |
| 99 | LEONARDO GIOVANNONI ET AL., "Isolation of anti-angiogenesis antibodies from a large combinatorial repertoire by colony filter screening," Nucleic Acids Research, 2001, vol. 9, no. 5, e27. | |
| 100 | SALVATORE DEMARTI ET AL., "Selective targeting of tumour neovasculature by a radiohalogenated human antibody fragment specific for the ED-B domain of fibronectin," European Journal of Nuclear Medicine, April 2001, short communication, vol. 28, no. 4. | |
| 101 | BARBARA CARNEMOLLA ET AL., "Enhancement of the antitumor properties of interleukin-2 by its targeted delivery to the tumor blood vessel extracellular matrix," Hemostasis, Thrombosis, and Vascular Biology, Blood, 1 March 2002, pages 1659-1665, vol. 99, no. 5. | |
| 102 | HALIN ET AL., "Enhancement of the antitumor properties of interleukin-12 by its targeted delivery to the tumor blood vessel extracellular matrix," Nature Biotechnology, March 2002, pages 264-269, vol. 20. | |
| 103 | C MARTY ET AL., "Cytotoxic targeting of F9 teratocarcinoma tumours with anti-ED-B fibronectin scFv antibody modified liposomes," British Journal of Cancer, 2002, pages 106-112, vol. 87, Cancer Research UK. | |
| 104 | SAMU MELKKO ET AL., "An antibody-calmodulin fusion protein reveals a functional dependence between macromolecular isoelectric point and tumor targeting performance," Int. J. Radiation Oncology Biol. Phys., 2002, pages 1485-1490, vol. 54, no. 5. | |
| 105 | PATRIZIA CASTELLANI ET AL., "Differentiation between High- and Low-Grade Astrocytoma Using a Human Recombinant Antibody to the Extra Domain-B of Fibronectin," American Journal of Pathology, November 2002, 1695-1700, vol. 161, no. 5, American Society for Investigative Pathology. | |
| 106 | L BORSI ET AL., "Selective Targeting of Tumoral Vasculature: Comparison of Different Formats of an Antibody (L19) to the ED-B Domain of fibronectin," Int. J. Cancer, 2002, pages 75-85, vol. 102. | |
| 107 | M SANTIMARIA ET AL., "Immunoscintigraphic Detection of the ED-B Domain of Fibronectin, a Marker of Angiogenesis, in Patients with Cancer," Clinical Cancer Research, February 2003, pages 571-579, vol. 9. | |
| 108 | J SCHEUERMANN ET AL., "Discovery and investigation of lead compounds as binders to the extra-domain B of the angiogenesis marker, fibronectin," Drug Development Research, 2003, pages 268-282, vol. 58. | |
| 109 | HALIN ET AL., "Synergistic therapeutic effects of a tumor targeting antibody fragment, fused to interleukin 12 and to tumor necrosis factor α ," Cancer Research, 15 June 2003, pages 3202-3210, vol. 63. | |
| 110 | L BORSI ET AL., "Selective targeted delivery of TNF α to tumor blood vessels," Blood First Edition Paper, prepublished online 21 August 2003, American Society of Hematology, DOI 10.1182/blood-2003-04-1039. | |
| 111 | M NICOLO ET AL., "Expression of Extradomain-B-containing Fibronectin in Subretinal Choroidal Neovascular Membranes," 2003, Elsevier Science Inc. | |
| 112 | F VITI ET AL., "Recombinant antibodies for the selective targeting of tumor neovasculature," Current Opinion in Drug Discovery & Development, 2002, pages 204-213, vol. 5, no. 2. | |
| 113 | F VITI ET AL., "Phage display libraries as a source of tumour-targeting agents," Chimia, 2001, pages 206-211, vol. 55, ISSN 0009-4293, The Academic Polymer Scene in Switzerland. | |
| 114 | D NERI ET AL., Edited by P. RIVA, "New Approaches to Tumour Targeting," Cancer Radioimmunotherapy: Present and Future, Nuclear Medicine Department, Hospital "M. Bufalini," Cesena, Italy, Harwood academic publishers. | |
| 115 | M BIRCHLER ET AL., "Expression of the extra domain B of fibronectin, a marker of angiogenesis, in head and neck tumors," Laryngoscope, July 2003, pages 1231-1237, vol. 113. | |
| 116 | ALAN L. EPSTEIN, et al., "Identification of a Monoclonal Antibody, TV-1, Directed against the Basement Membrane of Tumor Vessels, and Its Use to Enhance the Delivery of Macromolecules to Tumors after Conjugation with Interleukin 2," Cancer Research 55, pages 2673-2680, June 15, 1995. | |
| 117 | J PETERS ET AL., "Fibronectin Isoform Distribution in the Mouse: II. Differential Distribution of the Alternatively Spliced EIIIB, EIILIA, AND V Segments in the Adult Mouse," Cell Adhesion and Communication, 1996, pages 127-148, vol. 4, no. 2. | |
| 118 | Chevalier, X., et al., "Increased expression of Ed-B-Containing fibronectin (an embryonic isoform of fibronectin) in human osteoarthritic cartilage," British Journal of Rheumatology, Vol. 35(5), pages 407-415, (abstract only) | |
| 119 | Chevalier, X., et al., "Presence of ED-A containing Fibronectin in human articular cartilage from patients with osteoarthritis and rheumatoid arthritis," Journal of Rheumatology, Vol. 23(6), pages 1022-1030, June 1996 | |



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|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 120 | Polukouli, K., et al., "Immunolocalization of cellular fibronectins in the normal liver, cirrhosis, and hepatocellular carcinoma," Ultrastructural pathology, Jan.-Feb. 1995, Vol. 19(1), pages 37-43 | |
| 121 | Moyano, JV, et al., "Fibronectin type III5 repeat contains a novel cell adhesion sequence, KLDAPT, which binds activated $\alpha 4 \beta 1$ and $\alpha 4 \beta 7$ integrins," Journal of Biological Chemistry, Oct. 3, 1997, Vol. 272(40), pages 24832-24836 | |
| 122 | Yu, J L, et al., "Fibronectin exposes different domains after adsorption to a heparinized and an unheparinized poly(vinyl chloride) surface," Biomaterial, March 1997, Vol. 18(56), pages 421-427 | |
| 123 | Borsi, L., et al., "Preparation of phage antibodies to the ED-A domain of human fibronectin," Exp. Cell Res., May 1, 1998, Vol. 240(2), p. 244-251 | |
| 124 | KACZMAREK, J ET AL., Int. J. Cancer, vol. 58, pages 11-16, 1994. | |
| 125 | KIRKHAM, PM ET AL., J. Mol. Biol., 1999, pages 909-915, vol. 285. | |
| 126 | MANABE, RI-ICHIROH ET AL., Journal of Cell Biology, vol. 139(1), pages 295-307, October 6, 1997. | |
| 127 | MARDON, H J ET AL., Journal of Cell Science, vol. 104, pages 783-792, 1993. | |
| 128 | MENZIN, A W et al. Cancer 1998, vol. 82, pages 152-158. | |
| 129 | PAOLELLA, GIOVANNI E TAL, Nucleic acids research, vol. 16(8), pages 3545-3557, 1988. | |
| 130 | STAFFA, A ET AL., The Journal of Biological Chemistry, 272(52), pages 33394-33401, December 1997. | |
| 131 | VARTIO, T ET AL., "Differential expression of the ED sequence-containing form of cellular fibronectin in embryonic and adult human tissues," Journal of cell science, vol. 88, pages 419-430, 1987. | |
| 132 | UEDA, YASUO ET AL., "Selective Distribution of Fibronectin to a Tumor-Cell Line," Cancer Letters, vol. 31, pages 261-265, 1986. | |
| 133 | G MARIANI ET AL., "A pilot pharmacokinetic and immunoscintigraphic study with the technetium-99m-labeled monoclonal antibody BC-1 directed against oncofetal fibronectin in patients with brain tumors," Cancer, 15 Dec 1997, pages 2484-9, vol. 80, suppl. 12, ISSN: 0008-543X, Journal code: CLZ, abstract, USA. | |
| 134 | CARNEMOLLA et al., Journal of Cell Biology, vol. 108, pages 1139-1148, 1989. | |

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